

CONSERVATION STATUS. Critical. There is only one recent sighting; we saw less than twenty individuals in an area surrounded by agriculture, and probably under threat of agricultural conversion.

Dypsis mangorensis (Jum.) Beentje & J. Dransf. **comb. nov.**

SYNONYMS:

Neophloga mangorensis Jum., Ann. Inst. Bot.-Géol. Colon. Marseille sér. 4, 6 (3): 34 (1929); Jum., Fl. Madagascar 30: 78 (1945). Type: Madagascar, Mangoro Basin, *Perrier* 18042 (Holotype P).

Neophloga littoralis Jum., Ann. Inst. Bot.-Géol. Colon. Marseille sér. 4, 6 (3): 41 (1929); Jum., Fl. Madagascar 30: 80 (1945), **synon. nov.** Type: Madagascar, Mananara Basin, *Perrier* 12049 (Holotype P). NOTE: *Dypsis littoralis* Jum. of 1918 would have priority; this is now a synonym of *D. forficifolia* Mart.

Slender clustering palm in tufts of up to 7. **STEMS** 1–6 m high, 1.2–3 cm diam.; internodes c. 8 cm, near crown 2.5–3 cm, green, with flaking scales; crownshaft “eau-de-nil”. **LEAVES** spirally inserted, c. 10 in the crown, entire or with up to 3 pairs of leaflets; sheath 9–13 cm long, pale green turning red-brown, with scattered to distally dense dark red scales, and sometimes with some wax, with narrowly triangular auricles to 15 mm; petiole 10–25 cm long, 2–3 mm diam., red-brown with scattered scales; rachis 17–35 cm long, with scattered scales, in mid-leaf c. 2 mm wide; lamina *entire* and then 35–51 cm long, connate for 8–14 cm, lobes 28–37 × 5.5–8.2 cm, the apices truncate over a width of 0.5–1 cm (also dentate on distal outer margins), main veins 7–11, with a scaly midrib and with (faint) scattered scales on minor veins; or *pinnate* with 2–3 leaflets on each side of the rachis, the proximal 35–40 × 2–4.7 cm and acuminate, interval to median c. 10 cm, the median 24–28 × 1.1–1.7 cm, long-acuminate, interval to distal 0.2–6 cm, distal 22–32 × 1.8–4.2 cm, connate for 2–6 cm, main veins 5–7, apices truncate, 10–15 mm wide, dentate, glabrous or with a few scattered scales proximally. **INFLORESCENCE** interfo-



Dypsis mangorensis

liar, branched to 1 order, porrect to spreading; peduncle 14–53 cm long, proximally 6–8 × 2–4 mm, distally 2–5 mm diam., densely to sparsely pubescent; prophyll 15–35 × 0.7–1.3 cm, borne at 2–13 cm above the base of the peduncle, open in the distal 2–6 cm, glabrous or with scattered scales; peduncular bract 15–30 cm long, inserted at 13–22 cm from the base of the peduncle, open in the distal 2–4 cm or for more than halfway, with a few scattered scales, quickly deciduous; non-tubular peduncular bract occasionally present and c. 3 mm long; rachis 1.8–22 cm long, pubescent to glabrous, with 3–11 rachillae; rachillae 13–27 cm long, 1–2 mm diam., minutely puberulous to glabrous. **STAMINATE FLOWERS** with sepals 0.8–1.3 × 0.8–1.1 mm; petals 2–2.7 × 1.6–2.1 mm; stamens 6, in one series, the filaments 1–1.2 × 0.5 mm, cylindrical, the anthers 1.3–1.5 × 0.7–0.8 mm, dorsifixed, versatile, the locules parallel; pistillode 0.7–1.2 mm high, 0.4–0.6 mm diam. **PISTILLATE FLOWERS** unknown. **FRUIT** and **SEED** unknown.

NOTE. Remarkably like *D. faneva*, which however has didymous stamens.

SPECIMENS SEEN. Mananara Avaratra: Mananara, Oct. 1912 (fl.), *Perrier* 12049 (P, type of *N. littoralis*); Mananara, Oct. 1912 (y. bud), *Perrier* 12050 (P); Andravolaoa, April 1992 (old infl.), *Beentje et al.* 4639 (BH, K, MO, P, TAN). Mahanoro: Mangoro basin, Oct. 1927 (bud), *Perrier* 18042 (P, type of *N. mangorensis*).

SIMILAR SPECIMENS. *Guillaumet* 2528 (P) from Fenoarivo: Tampolo, probably belongs here. It differs in having an inflorescence branched to two orders, and in this respect somewhat resembles *D. faneva*. However, the rachillae and flowers are more similar to *D. mangorensis*. The two leaf fragments in the collection are probably not conspecific; the larger leaf seems to approach *D. paludosa*.

62. DYPISIS SANCTAEMARIAE

A handsome palm of the undergrowth of wind-pruned coastal forest on white sand raised-beaches on the Indian Ocean coast of Île Sainte Marie. It occurs in two forms that grow together, one with a pinnate leaf, the other with an entire leaf. In the field we thought that this species might be a form of *D. paludosa* with inflorescences branched to one instead two orders, but there are six stamens so the relationships are with *D. boiviniana*. The species epithet is derived from Sainte-Marie.

DISTRIBUTION. Known only from Île Sainte-Marie.

HABITAT. White sand forest; 20 m.

LOCAL NAMES. Not recorded.

USES. Not recorded.

CONSERVATION STATUS. Critical; known from a single population. The Forêt d’Ambohidena is under threat by the development of a new resort hotel.

Dypsis sanctaemariae J. Dransf. **sp nov.**

forma inflorescentiae floribus staminibus 6-staminibus *D. boiviniana*e affinis sed foliis epetiolatis, integris-bifidis, vel foliolis approximatis non fasciculatis, rachillis gracilioribus bracteis inconspicuis distincta. Typus: Île Sainte Marie, Forêt d’Ambohidena, *Dransfield et al.* JD7526 (Holotypus K; isotypus TAN).

Clustering palm of the forest undergrowth. **STEMS** to 2.5 m tall, c. 2 cm diam.; internodes c. 3 cm long, basally grey-brown, distally green, with scattered brown scales. **LEAVES** c. 8 in crown, porrect, forming a “shuttlecock” and tending to trap litter; sheath yellow-



Dypsis sanctaemariae. **A** leaf $\times 2/5$; **B** inflorescence $\times 2/5$; **C** detail of rachilla with pistillate flowers $\times 2$; **D** staminate flower $\times 10$. All from *Dransfield et al.* JD7526. Drawn by Rosemary Wise.

green or crimson, 17–20 cm long, 2–3 cm diam., densely covered in evenly spaced red-brown scales, auricles triangular, 0.5–2.5 \times 1–2 cm; petiole absent; blade to 120 cm long, entire, bifid, or with 2 very broad leaflets on one side of the rachis, the apical cleft to 48 cm deep, or irregularly divided into leaflets; costa or rachis 80–88 cm long, 7–9 mm wide at the base, abaxially densely covered with red-brown scales; leaflets very variable in width, to 10 on each side of the rachis, proximal leaflets 35 \times 0.5 cm, then leaflets increasing in length and width towards the middle of the leaf, where 44 \times 2.3 cm, then decreasing in length to the broad distal pair to 26.5 \times 3.5 cm, adaxial surface with very sparse minute brown punctiform scales along major veins, abaxially with abundant brown punctiform scales and bands of looser brown scales. **INFLORESCENCE** interfoliar, branched to one order; peduncle 41–45 cm long, erect or strongly reflexed, c. 10 mm wide at the base, tapering to 4–6 mm wide dis-

tally, thinly covered with red-brown tomentum; prophyll inserted 8.5–10 cm above the base of the peduncle, 18–36 \times 1.2–1.3 cm, striate, sparsely covered with red-brown scales; peduncular bract inserted at least 14 cm above the insertion of the prophyll, 25 \times 2 cm when split and opened out, scaly as the prophyll; rachis 11–13 cm, 4–6 mm diam. at the base, red-brown tomentose; rachillae 5–6, pendulous, 30–40 cm long, c. 3.5 mm diam. when fresh, shrinking to c. 2 mm diam. in dried specimens, with a basal bare portion 1–6 cm long, surface with scattered short brown hairs; triads c. 2 mm distant, partially sunken in shallow pits, the rachilla bracts inconspicuous, c. 0.5 \times 2.5 mm. **STAMINATE FLOWER** buds bluntly pointed, c. 2.5 \times 1.5 mm; sepals rounded, 1.5 \times 1.5 mm, irregularly keeled; petals 2.5 \times 1.5 mm, triangular; stamens 6, filaments (in bud) 0.7 mm long, anthers 1.5 \times 0.5 mm; pistillode conical, trifid, minute. **PISTILLATE FLOWER** 4 \times 2.5 mm; sepals 1.8 \times 1.8 mm,



**Dypsis
sanctaemariae**

broad imbricate; petals triangular 3.5 × 2 mm; staminodes 6, minute; ovary 3 × 2 mm, conical, stigmas eccentric. **FRUIT** unknown.

NOTES. The form of the inflorescence and stamen number suggest that this species is related to *D. boiviniana*. It may be distinguished from the latter



**Dypsis
soanieranae**

species by the form of the leaf, which is entire and bifid, or with few irregular approximate leaflets as opposed to numerous fascicled and divergent leaflets, and the rachillae which are more slender and with inconspicuous rachilla bracts. It is similar to *D. mangorensis* but differs in the very much larger leaf, lacking a petiole and in the much longer rachillae.

Maroantsetra: Hiaraka, Oct. 1986 (bud), *Dransfield et al.* JD6367 (K, TAN) seems a very slender (clustering) plant of this species; the stem is 1 cm thick, the sheath 15–16 cm long, the petiole is almost absent; the leaflets are regular and slightly smaller than in the above description; the inflorescence is also slender, with a 2 mm thick peduncle; there are four rachillae 21–23 cm long.

SPECIMENS SEEN. Île Sainte Marie: Lokintsy, Forêt d'Ambohidena, Nov. 1994 (fl.), *Dransfield et al.* JD7526 (Holotype K; isotype TAN), JD7527 (K, TAN).

63. DYPISIS SOANIERANAE

The description of this species is not complete, but the single long fat rachilla makes it so distinct that we feel obliged to give it a name, which refers to the locality.

DISTRIBUTION. Only known from Soanierana-Ivongo.

HABITAT. Lowland rain forest, 75 m.

LOCAL NAMES. *Tsinkary* (a rather general Betsimisaraka name for smaller palms).

USES. Not recorded.

CONSERVATION STATUS. Probably extinct. Not seen since 1938, in an area where the forest has been severely fragmented and is under continuing pressure.

Dypsis soanieranae *Beentje* sp. nov.

D. boiviniana affinis folio pinnato foliolis fasciculatis sed inflorescentia spicata rachilla longa distincta. Typus: Madagascar, Soanierana-Ivongo, Ambahoabe, *Lam & Meeuse* 5659 (Holotypus L).

Solitary palm. **STEM** 4–5 m tall, distally with internodes 4–6.5 cm long, c. 1.5 cm diam., distally with dense scales; nodal scars 2–5 mm. **LEAVES** pinnate; sheath 16–17.5 cm long, with scattered scales and ragged shoulders; petiole 13–13.5 cm long, 5–6 × 3–5 mm diam., flat adaxially, with scattered scales but glabrescent; rachis 71–95 cm long, with scattered scales, in mid-leaf 2–4 mm wide; leaflets 19–21 on each side of the rachis, in groups of 2–3, group interval 6–9 cm, the most proximal 17 cm below the next, proximal 17–25 × 0.4–0.8 cm, median 21–37 × 1.3–1.9 cm (interval 0.3–2 cm), distal 16–22 × 1.2–2.2 cm, lanceolate or slightly sigmoid, main veins 1–3, with faint reddish scattered scales on the minor veins, apices attenuate, distal pair joined for 1–3 cm, with 2–3 main veins and narrowly (< 4 mm) dentate apices. **INFLORESCENCE** interfoliar, unbranched; peduncle 40–47 cm long, dense red-pubescent, 3–4.5 mm in diam.; prophyll 20–28 × 0.8 cm, with scattered scales, open for the distal 1–2.5 cm, borne at c. 9 cm above the base of the peduncle; peduncular bract 22–27+ cm exserted from the sheath, opening in the distal 3–9 cm, densely scaly; rachilla (16 cm in Perrier, bud?) c. 72 cm long, 4–5 mm diam., densely puberulous, with rather densely packed triads. **STAMINATE FLOWERS** with sepals 1.7–2.2 × 1.2–1.5 mm; petals 2.7–3.2 × 1.6–1.8 mm; stamens 6, slightly biseriate (offset 0.1 mm), filaments 1–1.2 mm, thin, anthers